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EXAMINER	
MOUZON, LAJUANIA N	
ART UNIT	**PAPER NUMBER**
2109	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/20/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/672,718	AHMED ET AL.	
	Examiner	Art Unit	
	La Juania N. Mouzon	2109	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-50* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-50* is/are rejected.

7)☒ Claim(s) *28* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9/26/2003, 3/29/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 9/26/2003 and 3/29/2005 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Specification

2. The disclosure is objected to because of the following informalities: In the Brief Description of the Drawing section, Fig 10 does not depict fully what is shown in the diagram.

Appropriate correction is required.

3. The disclosure is objected to because of the following informalities: "learns" should be "learn" **(pg. 4 line(s) 21)** before "...balancers and servers of the web server cluster 21 to ..."

Appropriate correction is required.

4. Claim 28 is objected to because of the following informalities: the colon (:) is missing after "...further comprising...".

Appropriate correction is required.

5. The use of the trademarks Microsoft, Netscape Enterprise Server, Java WebServer, and Apache HTTP Server **(pg.6 line(s) 8)** has been noted in this

application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 1-22 and 26-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeLima et al. (US PGPub 2003/0023669 hereinafter DeLima et al.) filed on 7/24/2001, and further in view of Stone (US PGPub 2003/036886

hereinafter Stone). Figure 1 from DeLima et al. and Figure 12 from Stone are reproduce below.

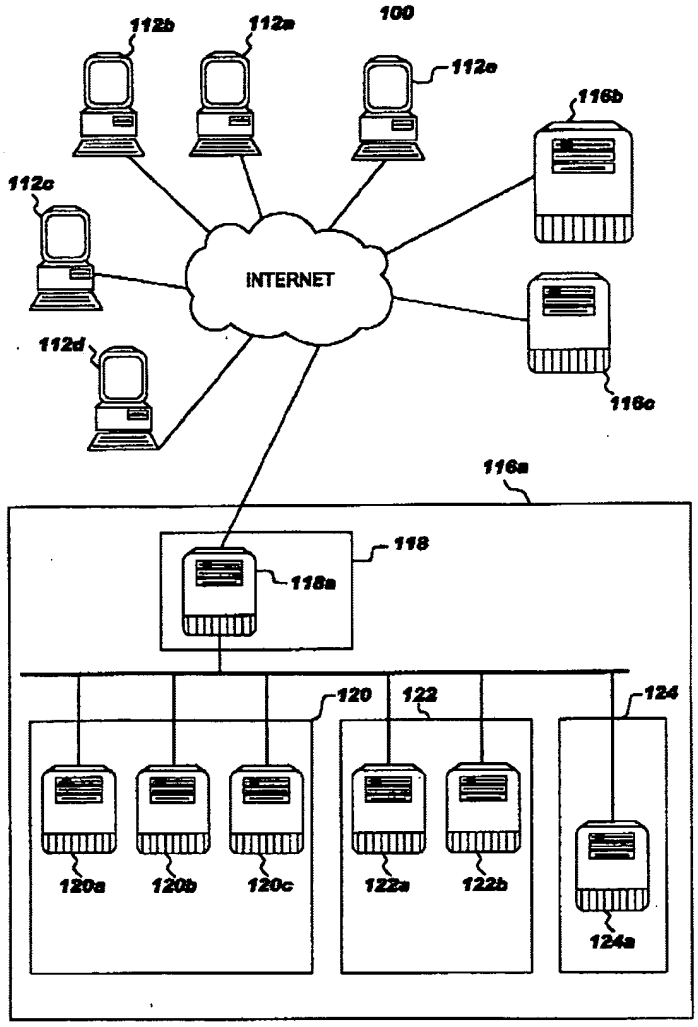
9. In regards to claims 1 and 26 DeLima et al. disclose, A system and method for maintaining a high availability processing environment, said system comprising:

a. a network having a plurality of clusters **(Fig. 1 shown below, teaches a network having a plurality of clusters as shown by 116a.)**,

b. each cluster of the network comprising a plurality of identical servers **(¶0005, teaches whereas the servers in the cluster are identical)**,

c. each cluster of the network being directly connected to at least one other cluster of the network, wherein each pair of clusters directly connected to each other is characterized by each server in a first cluster of the pair of clusters being directly connected to at least one server in a second cluster of the pair of clusters via a communication link **(Fig. 1, #100 shown below, teaches each cluster being directly connected via a communication link)**;

FIG. 1 (PRIOR ART)



10. DeLima et al. do not teach a control server adapted to monitor an operational status of said communication link, said operational status of the communication link being that said communication link is operational or non-operational, said control server being directly linked to at least one server in each cluster via a communication channel between the control server and the at least one server.

11. In the same field of endeavor Stone teaches a control server **(¶0044, teaches the control server (Node Monitor) that monitors the operational status of the communication link)**, which is directly connected to at least one server in each cluster, that monitors the operational status of the communication link **(Fig. 12, shown below, teaches the control server (Node Monitor) being directly connected to at least one server in each cluster)**.

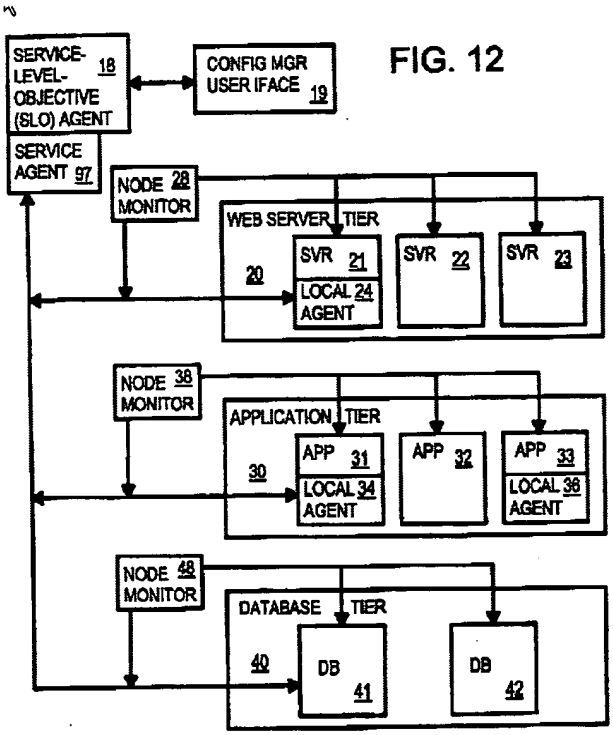


FIG. 12

12. Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to combine DeLima's et al. prior art admission of a network with a plurality of clusters directly connected to each other, with Stone's teaching to allow for the capability of monitoring the connectivity of the network to the servers.

13. In regards to claims 2 and 27 DeLima et al. do not teach, further comprising: a global dataset that includes an identification of each communication link in the network, said global dataset being accessible to the control server; and a local dataset specific to each cluster of the plurality of clusters, said local dataset including an identification of each communication link in the network to which the servers of said each cluster is coupled for flow of data out of the cluster, said global dataset being accessible to the servers of said each cluster.

14. In the same field of endeavor Stone teaches a global dataset, that is accessible to the control server, and local dataset that specifies the identification of each communication link in the network **(¶0057-¶0060, teaches the global dataset being on the service-level objectives (SLO) agent this is accessible to the control server. Also that the local dataset being on the service agents.)**

15. Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to combine DeLima's et al. prior art admission of a network with a plurality of clusters directly connected to each other, with Stone's teaching as discussed above to allow for the capability of a dataset globally and locally because if what the control server is accessing for the global dataset fails then the datasets are stored locally as a backup. Therefore, the operation of the tiers will continue to work without interruption.

16. In regards to claims 3 and 28 DeLima et al. do not teach, wherein the control server is adapted to monitor an operational status of a first communication link between a first server of the first cluster and a second server of the second cluster by sending a query signal to the first server, said query signal requesting the first server to send a response signal to the control server indicating the operational status of the first communication link, said operational status of the first communication link being that said first communication link is operational or non-operational.

17. In the same field of endeavor Stone teaches the testing the communication link from the first server in the first cluster to the second server in the second cluster to determine that of the operational status **(¶0044, teaches that the node monitor is able to test links from other network other than it's specific cluster to determine the operational status.)**.

18. In regards to claims 4 and 29 DeLima et al. do not teach, wherein the first server is adapted to respond to the query signal by sending a prompt signal over the first communication link to the second server, said prompt signal prompting the second server to send a return signal to the first server over the first communication link, said return signal or absence thereof being indicative of the operational status of the first communication link.

19. In the same field of endeavor Stone teaches that any element (a server, in this case) in the tier can perform any function of the tier's service components. Therefore monitoring of the communication links between each other would fall under one of those components **(¶0039).**

20. Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to combine DeLima's et al. prior art admission of a network with a plurality of clusters directly connected to each other, with Stone's teaching as discussed above to allow for the capability of monitoring the connections between servers to allow for the traffic to be allocated properly if the status of one of the connections has failed.

21. In regards to claims 5 and 30 DeLima et al. do disclose, wherein the first cluster **(Fig 1, shown above on page 5), that the first cluster is #118)** has a load balancer adapted to distribute data traffic uniformly among the servers comprised by the first cluster **(¶0005, teaches the first cluster having a load balancer)**.

22. DeLima et al. do not teaches, wherein upon receiving the response signal from the first server such that the response signal indicates that the first communication link is non-operational, the control server is adapted to notify the load balancer that the first communication link is non-operational.

23. In the same field of endeavor Stone teaches notification of the communication link non-operational status and rely status to the load balancer cluster **(¶0045, teaches notification of the communication link non-operational status and rely status to the load balancer.)**.

24. In regards to claims 6, 11, 31, and 36 DeLima et al. do not teach, wherein upon being notified that the first server or communication link is non-operational, the load balancer is adapted to fail over the first server.

25. In the same field of endeavor Stone teaches whereas the load balancer stops sending information to the first server **(¶0045, teaches that the load balancer stops sending information to the first server)**.

26. Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to combine DeLima's et al. prior art admission of a network with a plurality of clusters directly connected to each other, with Stone's teaching as discussed above to allow for the capability of the load balancer to stops sending information to the down server to rebalance the incoming traffic efficiently.

27. In regards to claims 7 and 32 DeLima et al. do not teach, wherein upon receiving the response signal from the first server such that the response signal indicates that the first communication link is non-operational, the control server is

adapted to inform a service node in the first cluster that the first communication link is non-operational.

28. In the same field of endeavor Stone teaches receiving the signal that the communication link is non-operational and notifies the service node **(¶0045-¶0046, teaches receiving said signal and notifying the service node.)**.

29. Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to combine DeLima's et al. prior art admission of a network with a plurality of clusters directly connected to each other, with Stone's teaching as discussed above to allow for the capability of notifying the service node to attempt to diagnose the problem and fix it for to get everything up and running properly and efficiently after not receiving said signal.

30. In regards to claims 8, 13, 33, and 38 DeLima's et al. do not teach, wherein upon being informed that the first server or communication link is non-operational, the service node is adapted to make a determination of a cause of the first server being non-operational.

31. In the same field of endeavor Stone teaches the service node making a determination of the cause of the non-operational status **(¶0045, teaches the service node determining the cause of the non-operational status.)**.

32. Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to combine DeLima's et al. prior art admission of a network with a plurality of clusters directly connected to each other, with Stone's teaching as discussed above to allow for the capability of the service node to determine the cause of the non-operational status to reduce the manual administrative needs.

33. In regards to claims 9, 14, 34, and 39 DeLima et al. do not teach, wherein upon making said determination of said cause the service node is adapted to facilitate making the first server or communication link operational.

34. In the same field of endeavor Stone teaches the service node taking steps to make the first server or communication link operational **(¶0045, teaches the service node taking the step to make the server or communication link operational.).**

35. Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to combine DeLima's et al. prior art admission of a network with a plurality of clusters directly connected to each other, with Stone's teaching as discussed above to allow for the capability of the service node repairing the non-operational server to allow for the traffic to be once again to be distributed among the entire network.

36. In regards to claims 10 and 35 DeLima et al. discloses, wherein the first cluster **(Fig 1, shown above on pg. 5, that the first cluster is #118)** has a load balancer adapted to distribute data traffic uniformly among the servers comprised by the first cluster **(¶0005, teaches the first cluster having a load balancer)**.

37. DeLima et al. does not teach, wherein upon not receiving the response signal from the first server within a predetermined period of time after sending the query signal to the first server, the control server is adapted make a determination that the first server is non-operational and to notify the load balancer that the first server is non-operational.

38. In the same field of endeavor Stone teaches the control server not receiving the signal within a predetermined period of time and determining the operational status of the first server **(¶0078, teaches the control server (Node Monitor) not receiving the signal within a predetermined period of time and the operational status of the first server.)**. Likewise Stone also teaches whereas the load balancer is notified **(¶0044, teaches the notification of the load balancer of the non-operation status.)**. While mentioned above in **¶19** the control server (node monitor) can be run on any element of the tier.

39. Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to combine DeLima's et al. prior art admission of a network with a plurality of clusters directly connected to each

other, with Stone's teaching as discussed above to be in contact with the node and if during that time that the server does not reply a notice after a set time limit a failure status would be sent to allow for the properly allocation of traffic.

40. In regards to claims 12 and 37 DeLima et al. do not teach, wherein upon not receiving the response signal from the first server or communication link within a predetermined period of time after sending the query signal to the first server, the control server is adapted to inform a service node in the first cluster that the first server is non-operational.

41. In the same field of endeavor Stone teaches the control server not receiving the signal within a predetermined period of time and determining the operational status of the first server or communication link **(¶0078, teaches the control server (Node Monitor) not receiving the signal within a predetermined period of time and the operational status of the first server or communication link.).** Stone also teaches notifying the service node of the non-operational status **(¶0045, teaches the control server (node monitor) notifying the service node (service agent) of the non-operational status)**.

42. Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to combine DeLima's et al. prior art admission of a network with a plurality of clusters directly connected to each other, with Stone's teaching as discussed above to allow for the capability of

notifying the service node of the operational status to allow for the service agent to keep accurate record of the status of all the components ran on the network.

43. In regards to claims 15 and 40 DeLima et al. discloses, wherein each cluster of the plurality of clusters has a load balancer adapted to distribute data traffic uniformly among the servers comprised by each cluster **(Fig. 1, as shown above on page 5, displays #118a as a load balancer for each cluster attached to #116a. As stated in ¶0005, teaches that #118a acts as a load balancer for each cluster in #116a (118, 120, 122, and 124.))**

44. Therefore, it would have been obvious to one of the ordinary skill in the art combine Stone's teaching as discussed above with DeLima's et al teaching to allow for the capability of having load balancer on each cluster since as stated by Stone using a tiered model may create availability problems or performance bottlenecks in which by added the load balancer would fix this issue.

45. In regards to claims 16 and 41 DeLima et al. do not teach, wherein the control server is adapted to receive a message from a first server of the first cluster or from a load balancer of the first cluster, said message indicating that an entity is non-operational, said entity being selected from the group consisting of a server of the first cluster and a communication link between the first server of the first cluster and a second server of the second cluster.

46. In the same field of endeavor Stone teaches that any element (a server or load balancer, in this case) in the tier can perform any function of the tier's service components. Therefore the first server or load balancer of the first cluster can notify the control server that there is an entity is non-operational **(¶0039).**

47. Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to combine DeLima's et al. prior art admission of a network with a plurality of clusters directly connected to each other, with Stone's teaching as discussed above to allow for the capability of having the first server or load balancer of the first cluster notify the control server of the non-operational status because if one of the two are down there is a backup of the notification of the status to the control server to get the proper entity up and running again.

48. In regards to claims 17 and 42 DeLima et al. do not teach, wherein upon receiving said message the control server is adapted to inform a service node of the first cluster that the entity is non-operational.

49. In the same field of endeavor Stone teaches receiving the signal that the communication link is non-operational and notifies the service node **(¶0045-¶0046, teaches receiving said signal and notifying the service node.)**.

50. Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to combine DeLima's et al. prior art admission of a network with a plurality of clusters directly connected to each other, with Stone's teaching as discussed above to allow for the capability of notifying the service node to attempt to diagnose the problem and fix it for to get everything up and running properly and efficiently after not receiving said signal.

51. In regards to claims 18 and 43 DeLima et al. do not teach, wherein the control server is directly linked to a first server of the first cluster and is not directly linked to a second server of the first cluster, wherein the first server is directly connected to the second server, and wherein the control server is adapted to monitor an operational status of the second server via direct communication with the first server coupled with direct communication between the first server and the second server, said operational status of the second server being that said second server is operational or non-operational.

52. In the same field of endeavor Stone teaches the connection of the control server being connected to the first server of the first cluster and is not directly linked to a second server of the first cluster, but indirectly connected through the first server in the first cluster. This is taught because the definition of a cluster is a group of servers working together as one, this being said each server in the cluster is at least connected to one other server. As shown in Fig 12, shown above on page 6, if the communication link between the control server and the

second server in the first cluster is lost then the second server of the first cluster is indirectly connected to the control server through the first server of the first cluster.

53. Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to combine DeLima's et al. prior art admission of a network with a plurality of clusters directly connected to each other, with Stone's teaching as discussed above to have the control server indirectly connected to the second server in the first cluster for a backup connection to the control server if the communication link between the second server and control server fails.

54. In regards to claims 19 and 44 DeLima et al. do not teach, wherein at least one cluster of the plurality of clusters does not have a load balancer adapted to distribute data traffic uniformly among the servers comprised by the first cluster.

55. In the same field of endeavor Stone teaches whereas at least one cluster of a plurality of clusters does not have a load balancer cluster **(Fig. 12, as shown above on page 6, displays the clusters without load balancers.).**

56. Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to combine DeLima's et al. prior art admission of a network with a plurality of clusters directly connected to each

other, with Stone's teaching as discussed above to remove the load balancers because the system running this configuration may not receive high traffic volume.

57. In regards to claims 20 and 45 DeLima et al. and Stone discloses, wherein the plurality of clusters includes a web cluster of web servers **(DeLima et al. ¶0005 and Stone ¶0029, teaches a cluster of web servers)**,

d. an application cluster of application servers **(DeLima et al. ¶0006 and Stone ¶0030, teaches a cluster of application servers)**,

e. and a database cluster of database servers **(DeLima et al. ¶0007 and Stone ¶0031, teaches a cluster of database servers)**,

f. the web cluster being directly connected to the application cluster, the application cluster being directly connected to the database cluster, the web cluster adapted to communicate with the database cluster by way of the application cluster functioning as an intermediary cluster between the web cluster and the database cluster. **(DeLima et al. Fig. 1 and Stone Fig 12, as shown above on page 5 and 6, respectfully, teaches that the web cluster is directly connected to the application cluster. The application cluster is directly connected to the database cluster. Also the application cluster being an intermediary for the web cluster and database cluster.)**

58. Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to combine DeLima's et al. prior art admission of a network with a plurality of clusters directly connected to each other, with Stone's teaching as discussed above because they both teach the same configuration for monitoring incoming web request.

59. In regards to claims 21 and 46 as mentioned above in ¶15 in combination with ¶56 DeLima et al. discloses, wherein the web cluster has a load balancer adapted to distribute data traffic uniformly among the web servers comprised by the web cluster, wherein the application cluster has a load balancer adapted to distribute data traffic uniformly among the application servers comprised by the application cluster, and wherein the database cluster has a load balancer adapted to distribute data traffic uniformly among the database servers comprised by the database cluster.

60. In regards to claims 22 and 47 DeLima et al. discloses, wherein the web cluster has a load balancer adapted to distribute data traffic uniformly among the web servers comprised by the web cluster **(DeLima et al. ¶0005 teaches that the web cluster has a load balancer.)**,

g. wherein the application cluster has a load balancer adapted to distribute data traffic uniformly among the application servers comprised by the application cluster **(DeLima et al. ¶0008 teaches that the application cluster has a load balancer.)**

61. DeLima et al. do not teach wherein the database cluster does not have a load balancer adapted to distribute data traffic uniformly among the database servers comprised by the database cluster.

62. In the same field of endeavor Stone teaches the database cluster does not have a load balancer **(Fig. 12, as shown above on page 6, does not show a load balancer on the database cluster.)**

63. Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to combine DeLima's et al. prior art admission of a network with a plurality of clusters directly connected to each other, with Stone's teaching as discussed above to not utilize a load balancer on the database cluster for eliminate performance bottlenecks.

64. Claims 23-25, 48-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeLima et al. (US PGPub 2003/0023669 hereinafter DeLima et al.) further in view of Stone (US PGPub 2003/036886 hereinafter Stone) as applied to claims 1 and 26 above, and further in view of Hickman et al. (US 6,523,036 hereinafter Hickman et al.) filed on 8/1/2000 and patented 2/18/2003. Figure 1A of Hickman et al. is reproduced below.

65. In regards to claims 23 and 48 as mentioned above in ¶57 DeLima et al. and Stone both discloses, wherein the plurality of clusters includes a web cluster of web servers and a database cluster of database servers.

66. DeLima et al. nor Stone teaches the web cluster being directly connected to the database cluster, the web cluster adapted to directly communicate with the database cluster.

67. In the same field of endeavor Hickman et al. references as prior art a 2-tier architecture having a Web cluster and a Database cluster directly connected and communicating with each other **(Fig. 1A, as shown below, displays the 2-tier architecture with the Web cluster and Database cluster connected and communicating directly with each other.)**

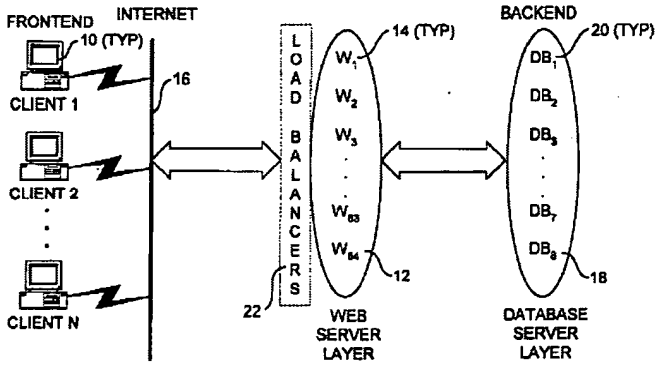


FIG. 1A
(PRIOR ART)

68. Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify Delima's et al. and Stone's teaching as discussed above to only have a 2-tier structure than a 3-tier architecture to be used with an Internet application that utilizes databases.

69. In regards to claims 24 and 49 DeLima et al. and Hickman et al. discloses, wherein the web cluster has a load balancer adapted to distribute data traffic uniformly among the web servers comprised by the web cluster. Likewise, DeLima et al. discloses wherein the database cluster has a load balancer adapted to distribute data traffic uniformly among the database servers comprised by the database cluster.

70. Stone do not teach having load balancers but the combination of Stone and DeLima et al. with load balancers is state above in ¶'s43-44.

71. In regards to claims 25 and 50 DeLima et al. and Hickman et al. discloses as mentioned above in ¶69, wherein the web cluster has a load balancer adapted to distribute data traffic uniformly among the web servers comprised by the web cluster.

72. DeLima et al. do not teach, wherein the database cluster does not have a load balancer adapted to distribute data traffic uniformly among the database servers comprised by the database cluster.

73. In the same field of endeavor Stone and Hickman's teach whereas the Database cluster does not have a load balancer **(Hickman Fig. 1A and Stone Fig. 12, as shown above on page 22 and 6, respectfully)**.

74. Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify DeLima's et al. and Stone's teaching as discussed above to allow for the capability of only the Web server cluster having a load balancer because all the information comes into this cluster first then it can be distributed accordingly according to the status of the other cluster's servers that the web server cluster has at that particular time.

Conclusion

75. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Douglas et al. US Patent 5,652,908 teaches the control server and its functions as mentioned in this document.

76. Any inquiry concerning this communication or earlier communications from the examiner should be directed to La Juania N. Mouzon whose telephone number is 571-270-3045. The examiner can normally be reached on Monday - Friday 8:00-5:00.

77. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Assouad can be reached on 571-272-0233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

78. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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